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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/622,615	08/18/2000	Mitsuzou Nogami	000774	7364

7590

12/27/2002

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EXAMINER

MERCADO, JULIAN A

ART UNIT

PAPER NUMBER

1745

DATE MAILED: 12/27/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application N .

09/662,615

Applicant(s)

NAKASATO ET AL.

Examiner

Julian Mercado

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 15 October 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) 6-10 and 19-24 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5, 11-18, 25 and 26 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10-15-02 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 1.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Remarks***

This Office Action is responsive to Applicant's amendment filed October 15, 2002.

The objection to claims 1, 2 and 12 have been withdrawn.

The rejection of claims 1-3, 5 and 26 under 102(b) based on Ohta '636 has been withdrawn.

The rejection of claims 1-3, 5, 11 and 26 under 102(e) based on Yamamura et al. has been withdrawn.

The rejection of claims 1-5, 11-18, 25 and 26 under 102(e) based on Ohta '726 has been withdrawn.

### ***Drawings***

The proposed drawing correction and/or the proposed substitute sheets of drawings, filed on October 15, 2002, have been approved by the examiner. Formal drawings thereof are required in reply to the Office Action to avoid abandonment of the application. The correction to the drawings will not be held in abeyance.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

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having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3, 5 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ohta et al. '636.

The rejection based on Ohta '636 has been discussed in detail in the previous Office Action under 35 U.S.C. 102(b). The rejection is maintained for the reasons and for the additional reasons to follow. The examiner notes that the scope of the claims has been amended so as to recite in the preamble a "sintered" nickel electrode. While Ohta '636 does not explicitly teach that an electrode having a sintered substrate is definitive of a sintered electrode, the skilled artisan would find this configuration obvious in view of the active material being impregnated into a sintered substrate, the resulting composite structure thereby defining a sintered electrode.

Applicant's arguments to Ohta '636 filed with the present amendment have been fully considered but they are not persuasive.

Contrary to Applicant's assertion, Ohta does not teach away from a sintered nickel electrode in that the substrate is specifically disclosed to be a sintered nickel porous substrate, *inter alia*. (col. 5 line 58) Applicant cites columns 1 and 2 of Ohta (understood to be the entirety of both columns) as a discussion of the "problems of sintered nickel electrodes." However, a closer review of columns 1 and 2, more specifically in column 1 at lines 48-52, will reveal that the alleged problem is not the employment of a sintered nickel electrode in itself but more accurately the prior art's close-packing of the active material nickel hydroxide powder, which results in the packing density increasing upon application of pressure. This condition results in the undesirable expansion of the electrode plates, puncture of the separator and subsequent deterioration of the battery's discharge properties.

As to a general teaching of Sr(OH)<sub>2</sub> being listed as one of fifteen possible compounds and therefore not equating as a specific teaching of such a compound, it is noted that the scope of the present claims recites such a compound in Markush format, which allows for interpretation of the members of this Markush group in the alternative. Additionally, Ohta specifically teaches Sr(OH)<sub>2</sub> in Example 2, therefore clearly anticipating its usage.

Claims 1-5, 11-18, 25 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ohta et al. '726 in view of Ovshinsky et al. (U.S. Pat. 5,344,728)

Ohta '726 has been discussed in detail in the previous Office Action. The rejection is maintained for the reasons and for the additional reasons to follow. With respect to the present amendment, the examiner notes that the scope of the claims has been amended so as to recite by way of preamble recitation a "sintered" nickel electrode. While the examiner maintains that Ohta '726 teaches sintered nickel substrates as conventional in the art as incorporated by reference to its prior art discussions, in order to further clarify that sintered nickel substrates are well-known and desired by way of a specific prior art disclosure, Ovshinsky is relied upon to teach a sintered nickel substrate. (col. 11 line 51 to col. 12 line 12) The skilled artisan in combining the teachings of Ohta '726 and Ovshinsky would find obvious to modify Ohta's '726 invention by employing a sintered nickel substrate. The motivation for such a modification would be to maintain the storage capacity comparable to a foamed metal substrate while increasing its energy density and cycle life. As to a sintered nickel substrate corresponding to a sintered electrode (as required by the present amendment to the claims), Ovshinsky in the abovecited portion of the patentees' is noted to not distinguish between sintered substrates and sintered electrodes, that is, a sintered nickel substrate is one and the same as a sintered nickel

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electrode. Additionally, as discussed above, the skilled artisan would find that a sintered nickel substrate constitutes a sintered nickel electrode in view of the active material in a sintered substrate being impregnated therein, the resulting composite structure thereby defining a sintered electrode.

Applicant's arguments to Ohta '726 filed with the present amendment have been fully considered but they are not persuasive.

As to Ohta '726 not using the word "sintered" in the Detailed Description, Ohta '726 is noted to incorporate the teachings of the prior art by reference (col. 2 line 8-9). Specifically, JP 5-28992 mentions the word "sintered" within the context of sintered nickel porous substrates.

Applicant submits that in Ohta '726 a coating layer coats the nickel hydroxide particle and is therefore **not** on the surface of the active material. [emphasis as submitted] In considering this line of argument, the examiner notes that this scope of interpretation of a hydroxide coating layer on a nickel hydroxide particle was specifically delineated in the previous rejection which, in the examiner's view, reads on the claims as the instant "active material" is not specifically claimed to be present as a layer. Therefore, while Applicant's argument may have merit and is consistent with the examiner's interpretation of Ohta '726, such argument is not persuasive as it is still outside the scope of the present claims.

Arguments against Yamamura et al. are deemed moot, as the ground of rejection based on this reference has been withdrawn. Applicant correctly points out that the nickel in Yamamura is not in the sintered material.

*Conclusion*

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Julian Mercado whose telephone number is (703) 305-0511. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick J. Ryan, can be reached on (703) 308-2383. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding

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should be directed to the receptionist whose telephone number is (703) 308-0661.

A handwritten signature in black ink, appearing to be "Ryan", written over the date.

December 22, 2002



Patrick Ryan  
Supervisory Patent Examiner  
Technology Center 1700